

CLAIMS

1. A method for regulating access to an object comprising the steps of:
for a plurality of users, allowing each user to designate the relationship characteristics
between that user and any other user;
5 identifying one of the plurality of users as an owner of the object;
determining if one of the plurality of users has access to the object by determining if
the relationship characteristics on at least one path between the one of the plurality of users
and the owner of the object is a trusted relationship between each of the users on that path,
wherein said path includes at least one other user beside said owner of the object and the one
10 of the plurality of users.
2. A method for regulating access to an object as in claim 1 wherein the
relationship characteristics include one or more conditions such that the relationship
characteristics are valid if and only if the one or more conditions are met.
3. A method for regulating access to an object as in claim 1 wherein the
15 relationship characteristics include one or more methods of determining a condition such that
the relationship is valid if and only if the one or more methods of determining a condition
confirm validity of the relationships characteristic.
4. A method for regulating access to an object as in claim 1 wherein the owner of
an object may designate another user as acting on behalf of the owner.
- 20 5. A method for regulating access to an object as in claim 1 wherein the
relationship characteristics include a trust relationship between the trusted user and the
designating user.
6. A method for regulating access to an object as in claim 1 wherein the
relationship characteristics include a trust relationship between the trusted user and the
25 designating user, wherein the trust relationship limits the tasks the trusted user may perform.
7. A method for regulating access to an object as in claim 1 wherein the
relationship characteristics include a trust relationship between the trusted user and the
designating user, wherein the trust relationship limits the objects the trusted user may access.

8. A method for regulating access to an object as in claim 7 wherein the trust relationship is limited to types of objects.

9. A method for regulating access to an object as in claim 7 wherein the trust relationship is limited to selected of objects.

5 10. A method for regulating access to an object as in claim 1 wherein the relationship characteristics include a distrusted relationship between the distrusted user and the designating user.

11. A method for regulating access to an object as in claim 10 wherein the distrusted relationship has an intermediary scope.

10 12. A method for regulating access to an object as in claim 10 wherein the distrusted relationship has an terminal scope.

13. A method for regulating access to an object as in claim 1 wherein the relationship characteristics include a trust relationship between the trusted user and the designating user and wherein the trust relationship specifies a maximum number of
15 relationships on a path.

14. A method for regulating access to an object as in claim 13 wherein the maximum number of relationships is one.

15. A method of regulating access to an object, the method comprising the steps of:

20 identifying an object or a set of objects to which access is to be regulated;
identifying an owner that has control of the object(s);
identifying an a relationship path which would otherwise be a valid path;
allowing each relationship element to specify the maximum number of subsequent
elements in the path; and
25 classifying that relationship path as invalid if for any element in that path the number
of subsequent elements in the path exceeds the limit specified by that element.

16. A method for regulating access to an object as in claim 15 wherein the relationship path includes a plurality of relationship characteristics and at least one

relationship characteristic includes one or more conditions such that the relationship characteristics are valid if and only if the one or more conditions are met.

17. A method for regulating access to an object as in claim 15 wherein the relationship path includes a plurality of relationship characteristics and at least one relationship characteristic includes one or more methods of determining a condition such that the relationship is valid if and only if the one or more methods of determining a condition confirm validity of the relationships characteristic.

18. A method for regulating access to an object as in claim 15 wherein the owner of an object may designate another user as acting on behalf of the owner.

19. A method for regulating access to an object as in claim 15 wherein the relationship path includes a plurality of relationship characteristics and at least one relationship characteristic includes a trust relationship between the trusted user and the designating user, wherein the trust relationship limits the tasks the trusted user may perform.

20. A method for regulating access to an object as in claim 15 wherein the relationship path includes a plurality of relationship characteristics and at least one relationship characteristic includes a trust relationship between the trusted user and the designating user, wherein the trust relationship limits the objects the trusted user may access.

21. A method for regulating access to an object as in claim 20 wherein the trust relationship is limited to types of objects.

22. A method for regulating access to an object as in claim 20 wherein the trust relationship is limited to selected of objects.

23. A method of resolving a conflict regarding a specified access to an object, the method comprising the steps of:

identifying a set of entities that have control of the object(s);
defining an event of access conflict as the condition wherein one or more entity relationship(s) would grant the specified access to the object(s) and one or more entity relationship(s) would deny the specified access to the object(s);
defining one or more classes of relationships between the object(s) and controlling

entities;

defining a hierarchy for the classes of object-entity relationships that is used to establish precedence in the event of an access conflict;

defining an equivalent class resolution rule for event(s) of access conflict wherein the controlling entity relationships for one or more relationship class to the object would grant the specified access and the controlling entity relationships for one or more relationship class with the same level in the class relationship hierarchy would deny the specified access to the object(s);

defining a within class resolution rule for event(s) of access conflict wherein the conflict arises among multiple entities which have the same class of relationship to the object(s); and

allowing or disallowing the specified access to the object(s) based on the entity relationship(s) based on the highest level class relationship to the object, the within class resolution rule, and the equivalent class resolution rule.

24. A method of regulating access to an object or set of objects, the method comprising the steps of:

identifying an entity;

defining one or more classes of control; and

specifying for the entity a set of zero or more conditions and/or a set of zero or more methods of determining a condition such that the entity is designated as a controlling entity of a specified class if and only if the said set of conditions is (are) met and/or the method(s) of determining a condition confirm(s) compliance.

25. A method of regulating access to an object, the method comprising the steps of:

identifying an object or a set of objects to which access is to be regulated;

identifying an entity that has control of the object(s);

identifying an a relationship path which would otherwise be a valid path;

defining a distrust relationship as the designation of a distrustee as distrusted by a distruster;

specifying for each distrust relationship a set of zero or more conditions and/or a set of zero or more methods of determining a condition such that the relationship is valid if and

only if the said set of conditions is (are) met and/or the method(s) of determining a condition confirm(s) validity; and

classifying that relationship path as invalid if for any element in that path the grantee of that element is the distrustee of the distrust relationship.